BRIEF NOTE

Tomanthera auriculata (Michx.) Raf. Extant in Ohio[1]

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ABSTRACT. *Tomanthera auriculata,* an annual member of the Scrophulariaceae, is known historically from four Ohio counties. In 1985, the taxon, thought to have been extirpated from Ohio, was rediscovered in Adams County. Habitat disturbances appear to play an important role in the perpetuation of this species.

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INTRODUCTION

Tomanthera auriculata (Michx.) Raf. (ear-leaved foxglove) is a formerly widespread member of the family Scrophulariaceae. Historically, the plant ranged through the Till Plains of Illinois, Iowa and northern Missouri, northward to southern Minnesota and Wisconsin, and eastward to Indiana, Ohio and Pennsylvania, with several scattered sites occurring as far south as Alabama (Pennell 1935). Its current range is greatly reduced with extant stations known only from Alabama, Illinois, Ohio, and Tennessee (National Heritage Task Force 1986).

In September, 1985, several large populations of *T. auriculata,* consisting of approximately 200 individuals scattered throughout 40 ha of a prairie glade-woodland complex, were discovered in southern Brushcreek Township, Adams County, Ohio. Approximately 600 plants were observed at the same localities during 1986. The dramatic increase in the number of plants in 1986 was the result of more extensive field surveys and the subsequent discovery of new populations.

DISCUSSION

Historically, the distribution of *Tomanthera auriculata* in Ohio included stations in Adams, Butler, Muskingum and Ottawa counties (Bentz and Cooperrider 1978). It was listed as extirpated from the Ohio flora (Division of Natural Areas and Preserves 1986), since the last reported collection was from Adams County in 1951 by Floyd Bartley (OS 45398).

Tomanthera auriculata is recognized easily in the field by its dark, purplish-green foliage, auricled leaves, and large, lavender corolla with a pale-pink throat with red-purple spots. According to Kuijt (1969) many members of the Scrophulariaceae are parasitic. Musselman (1972) found *Tomanthera* to be parasitic on the roots of a monocot, perhaps *Poa pratensis.*

The prairie glades in Ohio where *T. auriculata* grows are dominated by an *Andropogon-Bouteloua* association. This plant community includes the following herbaceous associates: *Bouteloua curtipendula, Sorghastrum nutans, Andropogon gerardii, A. scoparius, Silphium terebinthinaceum, S. trifoliatum, Agave virginica, Buchnera americana,* and *Liatris squarrosa.* Woody associates are *Juniperus virginiana, Rhamnus caroliniana, Cercis canadensis,* and *Physocarpus opulifolius.* In a state classification of plant communities developed by Anderson (1982), this community type was termed a big bluestem prairie. Habitats, determined from information provided on herbarium labels examined for this taxon at the Ohio State University Herbarium and the National Herbarium, Smithsonian Institute, range from dry oak woods, gravelly moraines, and dolomitic glades to mesic prairies and marshy borders of prairie ponds.

At the Adams County localities, all *Tomanthera* plants were restricted to shallow soils derived from the underlying Silurian age Peebles Dolomite (Summerson 1963). These seasonally wet soils of the *Andropogon-Bouteloua* prairies are very stony, almost suggesting a gravelly soil, with the irregular pieces being fragments of the Peebles Dolomite. The soil matrix is black, fine-grained, and very light and porous, with high water-retaining qualities. Ranges for pH are 7.5 to 8.1 at 13 cm below the

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surface (Braun 1928). The soil is a rendzina, a type indicating long occupancy by grassland (Braun 1928).

According to Orzell and Summers (1983), *T. auriculata* is probably native to mesic prairies where it originally frequented areas of natural disturbances. Similarly, human disturbance regimes are well documented at the Adams County sites. According to local landowners, some of the openings were plowed in the 1930s and grazed until the mid-1970s. The two largest populations occur where the heavy tree and shrub canopies were removed. Additionally, two other populations occur along a roadcut created in 1981 when the vegetation was removed during the construction of a gravel road. Another population occurs along the floodplain and erosional bank of a small stream that dissects one of the prairie openings. Disturbance appears to be an important factor in the perpetuation of this annual.

In response to its apparent drastic decline, *T. auriculata* is currently under review by the U.S. Fish and Wildlife Service (1985) as a possible candidate for ranking as a federally threatened or endangered plant (category 2). More information is needed to determine its exact status.

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